

Appl. No. 10/050,818
Amdt. dated Aug. 7, 2003
Reply to Office Action of July 9, 2003

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AMENDMENT TO THE CLAIMS

The Listing of Claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Sub A1
1. (currently amended) A method of preparing a high stability selectable selective hydrogenate hydrogenation catalyst producing and using for use in DMCHD manufacturing including the steps of:

(1) ~~a preparing procedure for~~ forming an Ru/Al₂O₃ catalyst including:

a. ~~putting inserting~~ 110 grams Al₂O₃ into a triple neck bottle under in a suction of vacuum conditions;

b. heating said bottle at a temperature of 110°C for 6 hours;

c. cooling to atmospheric ambient temperature then ~~stopping removing the~~ bottle from vacuum conditions;

d. ~~to add~~ adding a solution of 4.6 grams Ru/Cl₃ into said bottle and heating at a temperature of 60°C;

e. ~~to dry solution of~~ drying said solution by vacuum suction; and

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f. ~~to heat~~ heating said bottle in a heater at a temperature of 120°C for 16 hours ~~to preparation process thereof;~~ whereby the catalyst activity is raised by the steps of:

(2) ~~an activity raising procedure for said catalyst including:~~

a. ~~g. taking~~ removing the intermediate product of Ru/Al₂O₃ catalyst ~~out~~ from said bottle after step f ~~which is prepared from step (1),~~ and putting said intermediate product into a stainless steel breeder;

b. ~~h. to add~~ adding hydrogen gas into said breeder ~~with~~ at a predetermined velocity flow rate and ~~heated~~ heating at a temperature of 450°C for 2 hours; and

c. ~~i. cooling~~ cooling to atmospheric temperature and then adding a small quantity of air for ~~passivate~~ passivating the surface of said catalyst to obtain a ~~so as to get~~ high stability catalyst ~~ready for selectable~~ selective hydrogenating hydrogenation in a DMCHD manufacturing process ~~therefore.~~

(3) ~~a DMCHD manufacturing process which said high stability catalyst is used for a selectable hydrogenating reaction including:~~

a. ~~putting said Ru/Al₂O₃ catalyst onto a fixing bed of a reactor;~~

b. ~~to dissolve DMT (dimethyl terephthalate) in to ethyl acetate solution; and~~

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~~c. guiding DMT solution into said reactor with a predetermined velocity for
a selectable hydrogenate reaction to provide a high yield capacity capacity of DMCHD
manufacturing in high stability for a long term.~~

2. (currently amended) A method for producing high stability ~~selectable~~ selective
~~hydrogenate~~ hydrogenation catalyst according to ~~steps a-f~~ step (1) of Claim 1, wherein
said Al_2O_3 and RuCl_3 has a fixed ratio of 110:4.6075 by w.t.

3. (currently amended) A method for producing high stability ~~selectable~~ selective
~~hydrogenate~~ hydrogenation catalyst according to ~~step h~~ step (2) of Claim 1, wherein said
predetermined ~~velocity~~ flow rate of hydrogenate gas is 10 to 40 ml/min.

4. (withdrawn) A DMCHD manufacturing process according to step (3) of Claim
1, wherein a reaction temperature in said reactor is 100°C to 140°C.

5. (withdrawn) A DMCHD manufacturing process according to step (3) of Claim
1, wherein a reaction pressure in said reactor is 700 to 800 psi.

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6. (withdrawn) A DMCHD manufacturing process according to step (3) of Claim 1, wherein said MDT solution guided into said reactor has a velocity of 12 to 48 LHSV(h⁻¹).
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cont

7. (withdrawn) A DMCHD manufacturing process according to step (3) of Claim 1, wherein said high production of step (3) of Claim 1, wherein said high production ratio is over 90%.

8. (withdrawn) A DMCHD manufacturing process according to step (3) of Claim 1, wherein said catalyst has a long stability duration of 500 to 600 hours activation.
